

STATEMENT OF BASIS

Alabama Shipyard, LLC
Mobile, Alabama
Mobile County
Facility Number 503-6001

Alabama Shipyard has applied to renew the Major Source Operating Permit for their shipyard in Mobile. The company is located on Pinto Island in Mobile, on the eastern shore of the Mobile River. The Standard Industrial Classification for shipbuilding and ship repair is 3731. This proposed Title V Major Source Operating Permit will be issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

The original Title V permit was issued on April 23, 2002. This will be the fourth renewal.

The facility is located in Mobile County, which is currently in compliance with all National Ambient Air Quality Standards (NAAQS).

There are no current or ongoing enforcement actions against Alabama Shipyard necessitating additional requirements to achieve compliance with the proposed permit conditions. The enforcement and compliance history for the facility can be found at <https://echo.epa.gov/> (Search using Facility ID AL0000000109706001).

Based on the Title V permit application, this facility is a potential major source for Volatile Organic Compounds (VOC), Hazardous Air Pollutants (HAP), and Particulate Matter (PM). The facility is manned 8,760 hours per year.

The units for this facility are:

- 1 Indoor Surface Coating Unit
- 2 Indoor Blasting Unit
- 3 Indoor Surface Coating Line
- 4 Indoor Blasting Machine
- 5 Shape Priming Line
- 6 Shape Blasting Line
- 7 Open Air Surface Coating
- 8 Open Air Grit Blasting
- 9 Emergency Engines

Potential emissions from the facility based on 8760 hours of operations are estimated in the table below:

Regulated Pollutant	Potential Emissions (tons/year)
VOC	245
HAP (total)	30
PM	95
Fugitives	160

The fuel tanks were not included in the permit because they are 1000 gallons or less, and are on the trivial and insignificant list. The crane generators are not included in the permit because they are considered mobile sources.

No new sources will be added to the Title V and no permit limits were changed. The permit format and proviso wording were updated.

Indoor Surface Coating Unit

Description:

Ship components are transported to the paint and blast building and the west entrance doors are closed. Interior rear door panels are open to accommodate the appropriate process controls of paint filters or dust collectors. Paint is applied with an airless painting system.

Emissions Standards:

VOC Standard:

The VOC emissions to the atmosphere from the facility will be limited to 245 tons in any consecutive twelve month period. (ADEM Admin. Code R. 335-3-16-.01)

The VOC emissions to the atmosphere from the indoor surface coating line will be limited to 95 tons in any consecutive twelve month period. (ADEM Admin. Code R. 335-3-6-.01(b))

These limitations were established in the initial issuance of the Title V, which was issued April 23, 2002.

HAP Standard:

The volatile hazardous air pollutants (VOHAP) emissions to the atmosphere from this facility will be limited by the National Emission Standards for Shipbuilding and Ship

Repair, 40 CFR 63 Subpart II. The paint applied by this unit will be limited to the VOHAP content listed in table 2 of the subpart. (ADEM Admin. Code R. 335-3-11-.06(34))

Expected Emissions:

Based on paint usage records, actual emissions from this facility are expected to be 66 tons per year of VOCs and 40 tons per year of HAPs.

Periodic Monitoring:

Emissions will be determined by paint usage records. Compliance with permit limits will be determined monthly and reported quarterly.

Indoor Blasting Unit

Description:

Ship components are transported to the paint and blast building and the west entrance doors are closed. Interior rear door panels are open to accommodate the appropriate process controls of paint filters or dust collectors. Steel shot is used to prepare the steel surface for coating.

Particulate Standard:

No person shall cause or permit the emission of particulate matter in any one hour from any source in a Class 1 County in excess of the amount shown in Table 4-2 for the process weight per hour allocated to such source. For sources in Class 1 Counties, interpolation of the data in Table 4-2 for the process weight per hour values up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E=3.59P^{0.62}$$

Where: E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

(ADEM Admin. Code R. 335-3-4-.04)

Opacity Standard:

There shall be no more than one 6-minute average opacity greater than 20% in any 60-minute period, and no 6-minute average opacity of particulate emissions greater than 40%. (ADEM Admin. Code R. 335-3-4-.01(1))

Expected Emissions:

Potential uncontrolled emissions from this unit are estimated to be 8 tons per year of particulate matter.

Periodic Monitoring:

Visible emissions shall be monitored on a weekly basis, while operating, by someone familiar with Method 9 of 40 CFR60 Appendix A. If visible emissions are observed, corrective action shall be taken within 24 hours, and an additional visual observation shall be performed. The baghouse shall be inspected at least annually, and whenever emissions are observed.

Indoor Surface Coating Line

Description:

Steel plates are coated with a weld thru primer in this automated booth.

Emissions Standards:

VOC Standard:

The VOC emissions to the atmosphere from the facility will be limited to 245 tons in any consecutive twelve month period. (ADEM Admin. Code R. 335-3-16-.01)

The VOC emissions to the atmosphere from the indoor surface coating line will be limited to 95 tons in any consecutive twelve month period. (ADEM Admin. Code R. 335-3-6-.01(b))

These limitations were established in the initial issuance of the Title V, which was issued April 23, 2002.

HAP Standard:

The VOHAP emissions to the atmosphere from this facility will be limited by the National Emission Standards for Shipbuilding and Ship Repair, 40 CFR 63 Subpart II. The primer applied by this unit will be limited to a range between 340 grams of VOHAPs per liter of coating, and 780 grams of VOHAPs per liter of coating depending on the application. (ADEM Admin. Code R. 335-3-11-.06(34))

Expected Emissions:

Based on paint usage records, emissions from this facility are expected to be 66 tons per year of VOCs and 40 tons per year of HAPs.

Periodic Monitoring:

Emissions will be determined by paint usage records. Compliance with permit limits will be determined monthly and reported quarterly.

Indoor Blasting Machine

Description:

Steel plates are blasted with steel shot on this machine before being coated with primer.

Particulate Standard:

No person shall cause or permit the emission of particulate matter in any one hour from any source in a Class 1 County in excess of the amount shown in Table 4-2 for the process weight per hour allocated to such source. For sources in Class 1 Counties, interpolation of the data in Table 4-2 for the process weight per hour values up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E=3.59P^{0.62}$$

Where: E = Emissions in pounds per hour
P = Process weight per hour in tons per hour
(ADEM Admin. Code R. 335-3-4-.04)

Opacity Standard:

There shall be no more than one 6-minute average opacity greater than 20% in any 60-minute period, and no 6-minute average opacity of particulate emissions greater than 40%. (ADEM Admin. Code R. 335-3-4-.01(1))

Expected Emissions:

Potential uncontrolled emissions from this unit are estimated to be 8 tons per year of particulate matter.

Periodic Monitoring:

Visible emissions shall be monitored on a weekly basis, while operating, by someone familiar with Method 9 of 40 CFR60 Appendix A. If visible emissions are observed, corrective action shall be taken within 24 hours, and an additional visual observation shall be performed.

Shape Priming Line

Description:

Ship components are loaded onto a mechanical roller track leading into the blast and paint system. The item is first blasted with steel shot and then paint is applied in the automated booth.

VOC Standard:

The VOC emissions to the atmosphere from the facility will be limited to 245 tons in any consecutive twelve month period. (ADEM Admin. Code R. 335-3-16-.01)

The VOC emissions to the atmosphere from the indoor surface coating line will be limited to 95 tons in any consecutive twelve month period. (ADEM Admin. Code R. 335-3-6-.01(b))

These limitations were established in the initial issuance of the Title V, which was issued April 23, 2002.

HAP Standard:

The VOHAP emissions to the atmosphere from this facility will be limited by the National Emission Standards for Shipbuilding and Ship Repair, 40 CFR 63 Subpart II. The primer applied by this unit will be limited to 650 grams of VOHAPs per liter of coating, and 2,885 grams of VOHAPs per liter of solids. (ADEM Admin. Code R. 335-3-11-.06(34))

Expected Emissions:

Based on paint usage records, emissions from this facility are expected to be 66 tons per year of VOCs and 40 tons per year of HAPs.

Periodic Monitoring:

Emissions will be determined by paint usage records. Compliance with permit limits will be determined monthly and reported quarterly.

Shape Blasting Line**Description:**

Ship components are blasted with steel shot and painted on this line.

Particulate Standard:

No person shall cause or permit the emission of particulate matter in any one hour from any source in a Class 1 County in excess of the amount shown in Table 4-2 for the process weight per hour allocated to such source. For sources in Class 1 Counties, interpolation of the data in Table 4-2 for the process weight per hour values up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E=3.59P^{0.62}$$

Where: E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

(ADEM Admin. Code R. 335-3-4-.04)

Opacity Standard:

There shall be no more than one 6-minute average opacity greater than 20% in any 60-minute period, and no 6-minute average opacity of particulate emissions greater than 40%. (ADEM Admin. Code R. 335-3-4-.01(1))

Expected Emissions:

Potential uncontrolled emissions from this unit are estimated to be 8 tons per year of particulate matter.

Periodic Monitoring:

Visible emissions shall be monitored on a weekly basis, while operating, by someone familiar with Method 9 of 40 CFR60 Appendix A. If visible emissions are observed, corrective action shall be taken within 24 hours, and an additional visual observation shall be performed.

Open Air Surface Coating**Description:**

Ship components are surface prepped then coated with multiple layers using an airless coating application system or brush and roller.

Emissions Standards:**VOC Standard:**

The VOC emissions to the atmosphere from the facility will be limited to 245 tons in any consecutive twelve month period. (ADEM Admin. Code R. 335-3-16-.01)

The VOC emissions to the atmosphere from the indoor surface coating line will be limited to 95 tons in any consecutive twelve month period. (ADEM Admin. Code R. 335-3-6-.01(b))

The limitations for this unit were established in the initial issuance of the Title V, which was issued April 23, 2002.

HAP Standard:

The VOHAP emissions to the atmosphere from this facility will be limited by the National Emission Standards for Shipbuilding and Ship Repair, 40 CFR 63 Subpart II. The paint applied by this unit will be limited to the VOHAP content listed in table 2 of the subpart. (ADEM Admin. Code R. 335-3-11-.06(34))

Expected Emissions:

Based on paint usage records, emissions from this facility are expected to be 66 tons per year of VOCs and 40 tons per year of HAPs.

Periodic Monitoring:

Emissions will be determined by paint usage records. Compliance with permit limits will be determined monthly and reported quarterly.

Open Air Grit Blasting

Description:

This permit unit is for media blasting done in the dry dock and shipyard before paint is applied.

Particulate Standard:

This source is subject to the general provisions for a major source.

Expected Emissions:

Potential air emissions from this work are estimated to be 37 tons per year of particulate matter.

Periodic Monitoring:

Wording was added to the Recordkeeping and Reporting section to clarify the existing reporting requirement.

Emergency Engines

Description:

This permit unit is for two emergency generators and one emergency fire water pump.

Particulate Standard:

Particulate Matter (PM) emissions from Reciprocating Internal Combustion Engines (RICE) greater than 175 HP are limited to 0.40 g/HP-hr. Particulate matter emissions from the fire pump are limited to 0.22 g/HP-hr.

HC Standard:

Hydrocarbon (HC) emissions from RICE greater than 175 HP are limited to 1.0 g/HP-hr

CO Standard:

Carbon monoxide (CO) emissions for RICE greater than 175 HP are limited to 8.5 g/HP-hr. CO emissions from the fire pump are limited to 3.7 g/HP-hr.

NOx Standard:

Nitrogen Oxides (NOx) emissions from emergency generators greater than 50 HP are limited to 6.9 g/HP-hr. Emissions of Nitrogen Oxides and Non-Methane Hydrocarbon (NOx + NMHC) from the fire pump are limited to 3.0 g/HP-hr.

Expected Emissions:

Emissions in the manufacturer's literature showed actual air emissions from the 389 HP unit to be 0.4 g/HP-hr of CO, 2.6 g/HP-hr of NOx + HC, and 0.1 g/HP-hr of PM. Emissions from the 82 HP generator are estimated to be 5 g/HP-hr of NOx + HC.

Periodic Monitoring:

Annual operating hours will be monitored.

Permitting Fees:

Title V major sources are subject to operating permit fees which charge the facility a yearly amount based on the actual emission rate of pollutants for the previous year.

Affected States Notification

Standard practice is to notify of the issuance of this major source operating permit to all states bordering Alabama.

Environmental Justice

ADEM utilized EPA's EJSCREEN screening tool to help identify areas that may warrant additional consideration, analysis, or outreach (see Attachment I).

Recommendations:

I recommend that the proposed Major Source Operating Permit be issued to Alabama Shipyard. The proposed monitoring should be sufficient to demonstrate compliance with all applicable rules and regulations.